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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/740,465

12/22/2003

Jung Sang Back

0465-1062P

3623

2292 7590 06/19/2007  
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EXAMINER

MOON, SEOKYUN

ART UNIT

PAPER NUMBER

2629

NOTIFICATION DATE

DELIVERY MODE

06/19/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/740,465

Applicant(s)

BAEK ET AL.

Examiner

Seokyun Moon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-12 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 3,5,6,13-15 and 19-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendments***

#### **Drawing Objection**

1. The drawings were objected to for a minor spelling error in figure 3. The drawings have been amended. Accordingly, the objection has been withdrawn.

#### **Rejections under 35 U.S.C. 112, 1<sup>st</sup> paragraph**

2. Claims 7 and 10-21 were rejected under 35 U.S.C. 112 1<sup>st</sup> paragraph. The claims have been amended. Accordingly, the rejections have been withdrawn.

#### **Rejections under 35 U.S.C. 112, 2<sup>nd</sup> paragraph**

3. Claims 1-9, 15, and 21 were rejected under 35 U.S.C. 112 2<sup>nd</sup> paragraph. Claims 1, 7, and 9 have been amended. Accordingly, the rejections of claims 1-9 have been withdrawn. Claims 15 and 21 were rejected under 35 U.S.C. 112 2<sup>nd</sup> paragraph as being indefinite. In response to the rejection, the Applicants pointed out that MPEP 2173.05(b), paragraph A discloses that the courts held that the term “*about*” does not render claims indefinite. The Applicants’ arguments are persuasive and accordingly, the rejections of claims 15 and 21 have been withdrawn.

### ***Response to Arguments***

4. The Applicants’ arguments with respect to claim 1, 2, 4, 7-12, and 16-18 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 2, 4, 7-12, and 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants Admitted Prior Art (here in after “AAPA”) in view of Park et al. (US 6,362,804, herein after “Park”).

As to **claims 1 and 7** (note that the limitation of claim 7 is underlined in the following rejection), AAPA teaches a driving method for displaying a normal mode signal in a wide mode liquid crystal display device [pg 4 par. (0011) lines 1-2], for displaying an analog video signal having a horizontal back porch input to the wide mode LCD device as a normal mode [pg 4 par. (0012) lines 1-3], the method comprising:

outputting a source start pulse signal (“SSP” under “<Normal Operation Method>”) [fig. 2];

latching pixel data for a display (“*abnormal display*”) by using a main clock signal [par. (0013) lines 2-3] having a first period synchronized to the SSP signal [par. (0013) lines 9-10];

first skipping data latch (as “HSY” signal goes to a low level, data latching operation of the timing controller is paused) [fig. 2] during a first transition period (a portion of “*Hori Sync 4.7μs ± 0.1*”) [fig. 2] of the video signal;

latching pixel data corresponding to a normal mode by using a modulated clock signal having a second period (“*50.3 μs*”) [fig. 2] that is longer than the first period, and outputting the latched pixel data [par. (0014) lines 7-8]; and

second skipping data latch (as “HSY” signal goes to a low level in the next period, data latching operation of the timing controller is paused) [fig. 2] during a second transition period of the video signal.

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AAPA does not teach latching pixel data for a black display.

However, Park teaches a driving method for displaying a video signal having an aspect ratio which is different from the aspect ratio of a display device in the display device [abstract lines 1-3], comprising latching pixel data for a black display (“*BD*”) from a start of a source start pulse signal (“*SPI*”) to a start of a non-black image signal [fig. 9].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of AAPA to latch pixel data for a black display from a start of the source start pulse signal to the start of the non-black image signal which is equivalent to the end of the horizontal back porch, as taught by Park, in order to display the image having an aspect ratio which is different from the aspect ratio of the display device in a proper position on the display device.

As to **claim 2**, AAPA [fig. 2] teaches the source start pulse signal (“*SSP*” under “<*Normal Operation Method*>”) being outputted after a predetermined time period from a horizontal start pulse (“*HSP*”).

As to **claim 4**, AAPA [fig. 2] teaches the source start pulse signal (“*SSP*” under “<*Normal Operation Method*>”) being outputted after a certain time period from a rising edge of the horizontal start pulse (“*HSP*”).

As to **claim 8**, AAPA [fig. 2] teaches that at least one of the first and second skipping steps being performed by disabling an enable clock signal (“*HSY*”).

As to **claim 9**, AAPA [fig. 2] teaches the long period of the clock signal corresponding to 50.3  $\mu$ s.

As to **claim 10**, AAPA teaches a method for displaying a video signal having a horizontal back porch in a display device [par. (0011) lines 1-2 and par. (0012) lines 1-3], comprising:

generating a source start pulse signal (“*SSP*” under “<*Normal Operation Method*>”) [fig. 2];

latching pixel data for a display (“*abnormal display*” under “<*Normal Operation Method*>”); and

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skipping latch of subsequent pixel data (as “*HSY*” signal goes to a low level, data latching operation of the timing controller is paused) [fig. 2] during a transition period (a portion of “*Hori Sync 4.7μs ± 0.1*”) [fig. 2] of the video signal;

AAPA does not teach latching pixel data for a black display from a start of the source start pulse signal to an end of the horizontal back porch.

However, Park teaches a method for displaying a video signal in a display device [abstract lines 1-3], comprising latching pixel data for a black display (“*BD*”) from a start of a source start pulse signal (“*SPI*”) to a start of a non-black image signal [fig. 9].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of AAPA to latch pixel data for a black display from a start of the source start pulse signal to the start of the non-black image signal which is equivalent to the end of the horizontal back porch, as taught by Park, in order to display the image having an aspect ratio which is different from the aspect ratio of the display device in a proper position on the display device.

As to **claim 11**, AAPA teaches the method of claim 10, comprising latching subsequent pixel data during a high-level of the video signal (“*Video Signal*”) and skipping latch of subsequent pixel data (as “*HSY*” signal goes to a low level, data latching operation of the timing controller is paused) [fig. 2] during a second transition period (a portion of “*Hori Sync 4.7μs ± 0.1*” included in the next period) [fig. 2] of the video signal.

As to **claim 12**, all of the claim limitations have already been discussed with respect to the rejection of claim 2.

As to **claim 16**, all of the claim limitations have already been discussed with respect to the rejection of claim 10 since it is required for the display device of AAPA to have various means executing the driving method disclosed in claim 10.

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As to **claim 17**, all of the claim limitations have already been discussed with respect to the rejection of claim 11 since it is required for the display device of AAPA to have various means executing the driving method disclosed in claim 11.

As to **claim 18**, all of the claim limitations have already been discussed with respect to the rejection of claim 12.

***Allowable Subject Matter***

7. **Claims 3, 5-6, 13-15, and 19-21** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to the Applicants' disclosure.

Takasu et al. (US 6,377,251, herein after "*Takasu*") teaches a display device capable of displaying images/videos regardless of types of inputted video signals.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 7, 2007

- s.m.



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SUPERVISORY PATENT EXAMINER